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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,094	09/08/2003	Li-Ting Chen	ALIP0031USA	2093
27765	7590	03/03/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			GUPTA, PARUL H	
			ART UNIT	PAPER NUMBER
			2656	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/605,094	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Parul Gupta	<b>Art Unit</b> 2656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-10 are pending for examination as interpreted by the examiner.

#### ***Drawings***

2. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

3. The disclosure is objected to because of the following informalities: minor typographical errors such as multiple uses of "becoming" instead of "become" in paragraph 0004 of the background of invention section, the extra "this" used before "increasing the region of stability" in paragraph 0006 of the background of invention section, the lack of an apostrophe in "systems" in the second to last sentence of paragraph 0007, and the use of "the CD drive can runs at a speed without a limit" in paragraph 0027. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2656

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 -10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu, US Patent 6,459,665 in view of Nakano et al., US Patent 5,742,568.

Regarding claim 1, Chu teaches in figure 3B a compensator circuit for compensating an error signal generated by an optical storage device, the compensator circuit comprising: a phase-lead compensator (30') for receiving the error signal and generating a phase-lead error signal; a band-pass filter (34') connected in parallel with the lead compensator for magnifying a rotating frequency error signal and generating a filtered signal (column 4, lines 64-67); and an adder (shown between 32' and 34') for adding the phase-lead error signal and the filtered signal so as to lower a steady state error of the error signal.

Chu does not but Nakano et al. teaches the compensator circuit not comprising any phase-lag compensator (column 9, line 66-column 10, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to remove the phase-lag compensator from the invention of Chu as taught by Nakano et al. This is because phase lag due to the delay time abruptly increases as the frequency becomes higher (column 9, lines 14-17 of Nakano et al.).

Regarding claim 9, Chu teaches a method for compensating an error signal generated by an optical storage device (column 4, lines 9-10), the method comprising: generating a phase-lead error signal according to the error signal with a phase-lead compensator; generating a filtered signal according to the error signal with a band-pass

filter (column 3, lines 22-24); and adding the phase-lead error signal and the filtered signal with an adder (column 4, lines 34-35) to lower a steady state error of the error signal (column 4, lines 41-45).

Chu does not but Nakano et al. teaches the method not comprising the step of generating a phase-lag error signal with a phase-lag compensator (column 9, line 66-column 10, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to remove the phase-lag compensator from the invention of Chu as taught by Nakano et al. This is because phase lag due to the delay time abruptly increases as the frequency becomes higher (column 9, lines 14-17 of Nakano et al.).

Regarding claim 2, Chu teaches the compensator circuit of claim 1, wherein the phase-lead compensator is a differentiator (column 4, lines 23-27).

Regarding claim 3, Chu teaches the compensator circuit of claim 1 is installed inside an optical storage device (column 4, lines 9-12).

Regarding claim 4, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a DVD-ROM drive (column 4, lines 9-12).

Regarding claim 5, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a CD-ROM drive (column 4, lines 9-12).

Regarding claim 6, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a CD-RW drive. Column 4, lines 9-12 describe the different devices that are included. CD-RWs serve the same purpose as CD-ROMs in regards to

phase compensation. Thus, it is inherent to include them as a device that can be used in the invention.

Regarding claim 7, Chu teaches the compensator circuit of claim 3, wherein the optical storage device is a DVD-RW drive. Column 4, lines 9-12 describe the different devices that are included. DVD-RWs serve the same purpose as DVD-ROMs in regards to phase compensation. Thus, it is inherent to include them as a device that can be used in the invention.

Regarding claim 8, Chu teaches the compensator circuit of claim 3, wherein the optical storage device further comprises a pickuphead (column 1, lines 32-35).

Regarding claim 10, Chu teaches the method of claim 9, wherein the phase-lead compensator is a differentiator (column 4, lines 23-27).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takeuchi et al., US Patent 5,880,953, relates to a control system in an information recording and reproducing apparatus that uses a similar compensation system for error control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 8:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PHG  
2/28/06

  
ANDREA WELLINGTON  
SUPERVISORY PATENT EXAMINER